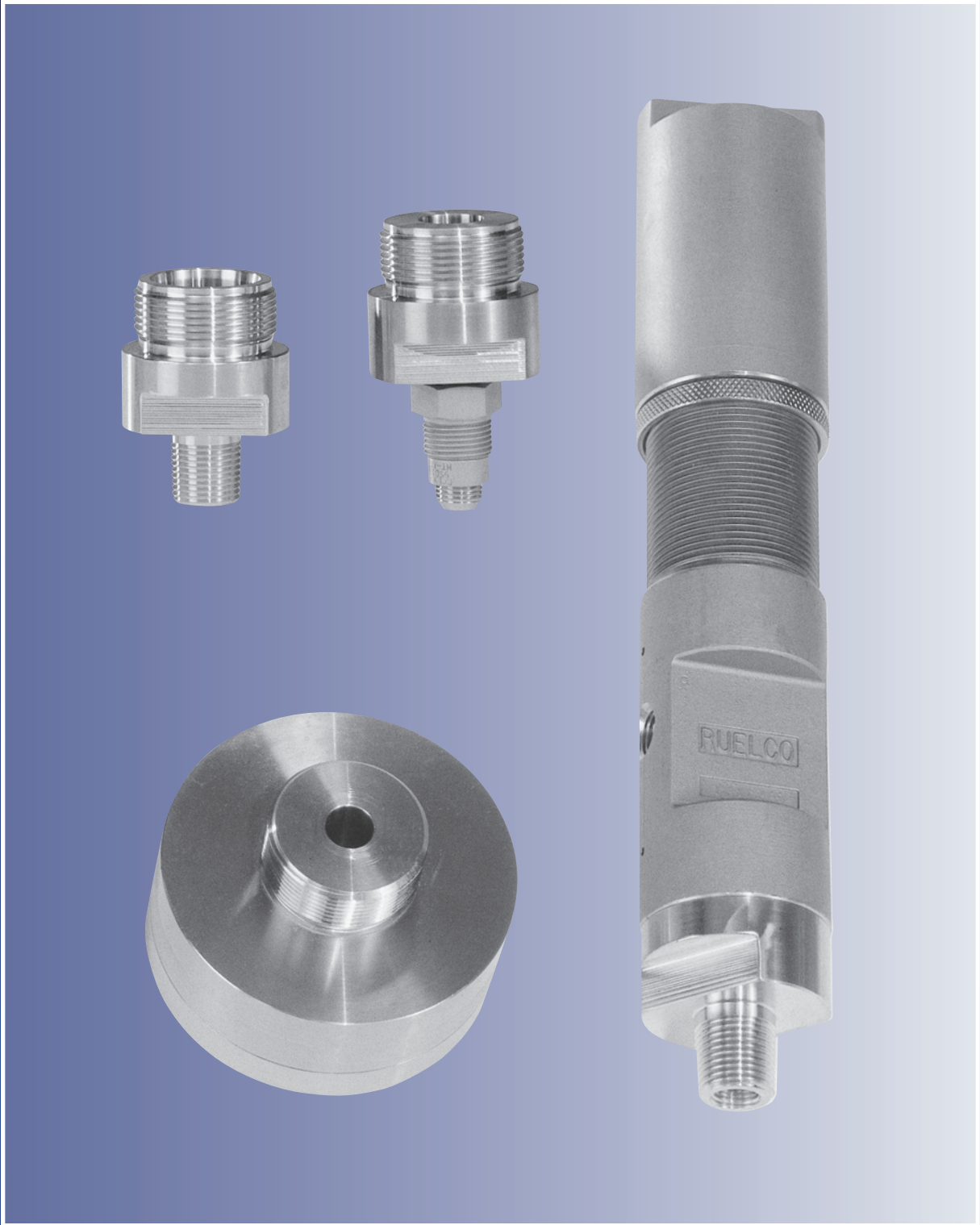


# Ruelco



**SS-1 Pressure Switch**

**Model 4102**

Phone (504) 340-0055  
Fax (504) 340-0056

# SS-I

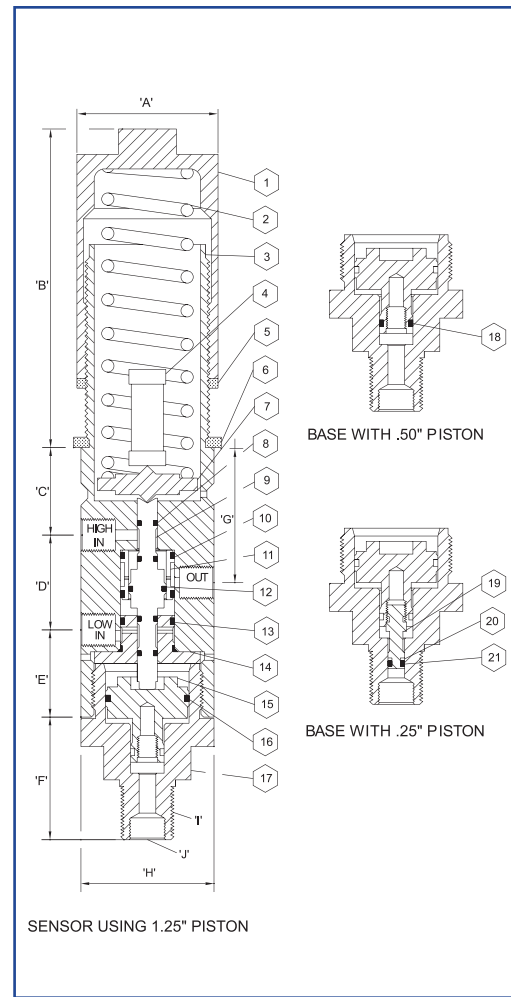
## Pneumatic Pressure Switch

### FEATURES

- 316 stainless steel construction (models to N.A.C.E. MR0175 available).
- Standard base range 10-10,000 p.s.i. (with 1/4" piston option).
- Operating pressure range from .5 to 20,000 psi.
- Block-and-bleed 3-way valve.
- Holds constant and accurate set points.
- Designed for 1% plus or minus repeatability on set points.
- Minimum deadband between trip and reset pressure.
- Spring may be replaced with instrument and sensing pressure present in the sensor.
- Vent above sensing piston prevents high pressure from entering instrument supply should a piston seal leak develop.
- Optional tamper proof lock-out device available upon request.

### GENERAL DESCRIPTION:

The Ruelco 'SS-I' pneumatic pressure switch is a three way block and bleed valve that is operated by pressure acting on a piston opposing an adjustable spring force. It functions as either a normally closed or normally open valve, depending on through which of the two ports the instrument pressure is supplied. These ports are marked 'HI IN' or 'LO IN' on the switch body. The output port, marked 'OUT' on the switch body, is the same for either mode of operation. Pressure applied to the sense port will cause the valve to operate. The Ruelco 'SS-I' pneumatic pressure switch can also be used as a two way bleed only valve in which case one of the 'HI IN' or 'LO IN' ports is plugged depending on whether the valve is to be used as a high or a low pilot.



## Parts List For Pressure Switch Model SS-I

Item	Qty.	Description	Material
1	1	Spring Cap	316L or ASTM-A-351 S.S.
2A	1	Spring (Blue)	ASTM-401
2B	—	Spring (Red)	ASTM-401
2C	—	Spring (Silver)	ASTM-401
2D	—	Spring (Green) optional	Inconel X-750
2E	—	Spring (Yellow) optional	Inconel X-750
2F	—	Spring (Purple) optional	Inconel X-750
3	1	Body For SS-I	CF-8M St. Stl.
4	1	Parts Tube	Acetate Butyrate
5	1	Lock Ring	AISI 316 St. Stl.
6	1	Panel Mnt. Ring (Optional)	AISI 316 St. Stl.
7	1	Spring Plate	AISI 316 St. Stl.
8*	4	Spool O-ring	Viton
9	1	Spool For SS-I	17-4 PH St. Stl.
10*	2	Shuttle Seal	Viton
11	1	Shuttle	AISI 316 St. Stl.
12*	1	Spool O-ring	Viton
13*	2	Spool Sleeve Seal	Viton
14	1	Spool Sleeve	AISI 316 St. Stl.
15	1	1.25"/.50" Piston	AISI 316 St. Stl.
16*	1	1.25" Piston O-ring	Viton
17	1	1.25"/.50"/.25" Base	AISI 316 St. Stl.
18*	1	.50" Piston O-ring	Viton
19	1	.25" Piston (Optional)	AISI 316 St. Stl.
20*	1	.25" Piston Backup	Teflon
21*	1	.25" Piston O-ring	Viton
22	—	Repair Kit	* Items

Parts Tube Not Supplied With Switches Using 3.0" or .187" Sensor Base.

### Switch Specifications

Valve Type	3 or 2 Way
Set Point Deviation	± 1%
Deadband	3 Way 3% of Range 2 Way 5% of Range
Max. Instr. Press.	3 Way 60 PSI 2 Way 150 PSI
Cv Factor	0.160
Ambient Temp. Range	-20 to 250 deg. F -29 to 122 deg. C

### 1.25"/.50"/.25" Switch Sensor Specifications

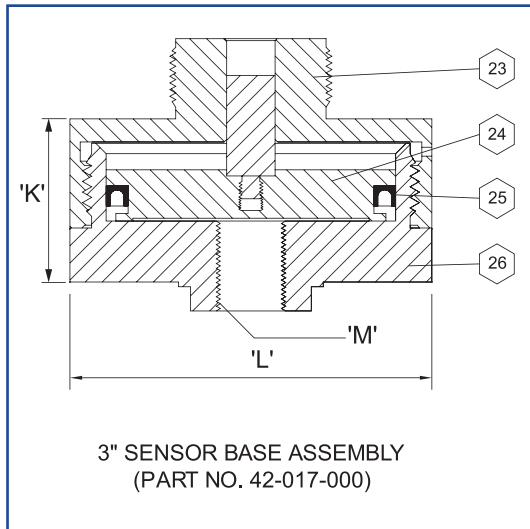
Sensor Type	Piston
Max. Oper. Press.	10,000 PSI (690 BAR)
Burst Pressure	20,000 PSI (1380 BAR)
Temperature Range	-20 to 250 Deg. F -29 to 122 Deg. C

### Dimensions Inch (MM)

A	2.12 (53.8)
B (Max)	6.13 (155.7)
C	1.32 (33.5)
D	1.43 (36.3)
E	1.22 (31.0)
F	1.82 (46.2)
G	1.23 (31.2)
H	2.0 (50.8)
I	1/2" MNPT
J	1/4" MNPT
Panel Mount Hole	1.875 (48.0)
Valve Ports	1/4" FNPT
Weight*	4.9 lbs. (2.3Kg)

\* For Switch and 1.25/50/25 Sensor Base.

Spring Codes (COLOR)		Available Ranges - PSI (BAR)														
		.5-20 (.03-1.4)	4-40 (.3-2.75)	10-80 (.7-5.5)	10-115 (.7-7.9)	20-230 (1.4-15.8)	50-450 (3.4-31)	200-750 (13.8-51.8)	500-1500 (34.5-103.5)	1000-3000 (69-207)	1000-3000 (69-207)	2000-5000 (138-345)	5000-10000 (345-689)	2000-5000 (138-345)	3500-9000 (241-620)	8500-20000 (586-1380)
STANDARD SPRING	INCONEL SPRING															
B (Blue)	G (Green)	X			X			X			X			X		
R (Red)	Y (Yellow)		X			X			X		X				X	
S (Silver)	P (Purple)			X			X			X		X			X	
Piston Diameter		3.0"	3.0"	3.0"	1.25"	1.25"	1.25"	.50"	.50"	.50"	.25"	.25"	.25"	.187"	.187"	.187"
Piston Code		0	0	0	1	1	1	2	2	2	3	3	3	4	4	4
OPTIONAL BASE										OPTIONAL PISTON			OPTIONAL BASE			



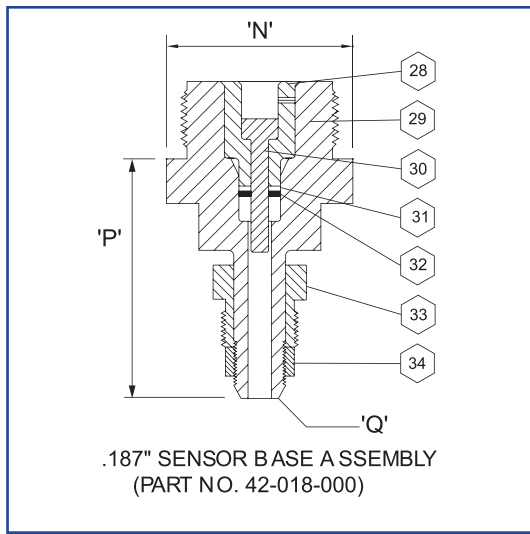
### 3.0" Sensor Base

ITEM	QTY.	DESCRIPTION	MATERIAL
23	1	Upper Housing	17-4 P.H. St. Stl.
24	1	Piston Assembly	17-4 P.H. St. Stl.
25	1	Seal	Viton
26	1	Lower Housing	17-4 P.H. St. Stl.
27	—	Rep. Kit F/ 3.0" Base	Items 8,10,12,13,25

Sensor Type	Piston
Max. Oper. Press.	5,000 PSI (345 BAR)
Burst Pressure	10,000 PSI (690 BAR)
Temperature Range	-20 to 250 Deg. F -29 to 122 Deg. C

K	2.0 IN. (50.8 MM)
L	3.75 IN. (95.2 MM)
M	1/2" FNPT
Weight*	8.5 lbs. (3.7 Kg.)

\* For Switch and 3.0" Sensor Base



### .187" Sensor Base

ITEM	QTY.	DESCRIPTION	MATERIAL
28	1	Retainer Sleeve	AISI 316 St. Stl.
29	1	.187" Sensor Base	17-4 P.H. St. Stl.
30	1	.187" Piston	17-4 P.H. St. Stl.
31	1	Back -Up Ring	Glass Filled Teflon
32	1	Seal	Viton
33	1	9/16" Gland Nut	AISI 316 St. Stl.
34	1	9/16" Gland Collar	AISI 316 St. Stl.
35	—	Rep. Kit F/ .187" Base	Items 8,10,12,13,31,32

Sensor Type	Piston
Max. Oper. Press.	20,000 PSI (1380 BAR)
Burst Pressure	40,000 PSI (2760 BAR)
Temperature Range	-20 to 250 Deg. F -29 to 122 Deg. C

N	2.0 IN. (50.8 MM)
P	2.57 IN. (65.3 MM)
Q	9/16/ M/P Autoclave
Weight*	5.0 lbs. (2.3 Kg.)

\* For Switch and .187" Sensor Base

### Ordering Code: 4102 X X X 0 0 0

BASE MODEL NUMBER

Standard Corrosive Service - (-)  
N.A.C.E. Option - N

SPRING CODE (see range chart)

PISTON CODE (see range chart)

# Ruelco



**SS-1 With Optional Scale  
Model 4103**

## **SS Series Pressure Switches**

**SS-1 High Flow**

**SS-2 Standard**

**SS-2 High Flow  
(Pneumatic or Hydraulic)**

**SS-1 Differential**

**SS-2 Differential**

**SS-4 Hydraulic Bleed**

**SS-E Electric**

**SS-E Electric Differential**